



Nicolás Antonio Mellado Fernández

ABOUT ME

Electrical Engineer acquainted and highly interested in electrolyzers, hydrogen production, and related research.

Served as a teaching assistant across three courses in the degree program.

Extensive knowledge of technical regulations, international standards, and simulation software for analysis of distribution and transmission systems, electrical protections and power electronics.

Over 1 year of experience in technical assistance projects and consulting for major mining, pulp and paper, and steel companies.

Professional with great adaptability to diverse tasks and accustomed to strict compliance with report deadlines, spreadsheets, and presentations.

Proactive person, self-demanding, excelling in collaborative environments, and always eager to learn.

WORK EXPERIENCE

05/10/2022 – 31/01/2024 Concepción, Chile

ELECTRICAL SYSTEMS ENGINEER UNIVERSITY OF CONCEPCIÓN

Contributions to technical assistance projects:

- CODELCO: Used PSIM software to simulate ground current behavior in Ministro Hales' distribution system, analyzing causes and solutions.
- BHP: Conducted coordination studies for protection, short-circuit, and power flow using ETAP software for Minera Spence.
- AMSA: Simulated reactive power compensator operations using PSIM for Minera Escondida, also conducted power flow study for Minera Los Pelambres with DIgSILENT.
- Pucobre: Carried out power flow, short-circuit, equipment sizing, stability, and self-generation system studies using ETAP and DIgSILENT for El Espino mining project.
- CAP: Explored technical feasibility of electrolyzer plant installation in Huachipato's electrical distribution system, including harmonic distortion analysis and systemic studies using ETAP, DIgSILENT and PLECS.
- Capstone Copper: Studied power flow incorporating the operation of a new mobile electrical substation at Mantoverde mine loop.
- Arauco: Simulated VDF filter operation at Licancel plant via PLECS, conducted protection coordination and short-circuit studies. Also, handled short-circuit study for Nueva Aldea pulp plant. Analyzed induction motor failure at Horcones plant and adjusted soft starter protection parameters for the SAM | PSCAD.

EDUCATION AND TRAINING

01/03/2017 – 30/03/2023 Concepción, Chile

ELECTRICAL ENGINEER University of Concepción

Website <https://www.udec.cl>

01/03/2024 – CURRENT Genova, Italy

PHD IN ELECTRICAL ENGINEERING University of Genoa

Website <https://unige.it/>

● **LANGUAGE SKILLS**

Mother tongue(s): **SPANISH**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C1	C1	C1	C1
ITALIAN	A1	A1	A1	A1	A1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● **DIGITAL SKILLS**

Powerfactory DlgSILENT | PLECS | Excel | Word | Powerpoint | ETAP | PSIM | SAM | PSCAD

● **SOCIAL AND POLITICAL ACTIVITIES**

01/12/2020 – 01/03/2021 Concepción, Chile

President, Civil Electrical Engineering Students' Center.

During the pandemic and return to classes, led a team of 9 individuals responsible for student welfare and collaboration with academic administrators.

01/01/2017 – 31/03/2017 Concepción, Chile

Health Team Coordinator in Forest Emergency Operation.

Write here the deDuring the 2017 forest fires in the Biobío Region, responsible for the logistics required to transport health volunteers to affected areas.